



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/670,971	09/27/2000	Daniel J. Sherlock	99PS017/KE	5977

7590 12/03/2003

Rockwell Collins Inc
Intellectual Property Department
400 Collins Road NE MS 124 323
Cedar Rapids, IA 52498

EXAMINER

NGUYEN, HAU H

ART UNIT	PAPER NUMBER
----------	--------------

2676

DATE MAILED: 12/03/2003

8

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/670,971

Applicant(s)

SHERLOCK ET AL.

Examiner

Hau H Nguyen

Art Unit

2676

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 September 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 7, 11, 12 and 24 is/are allowed.
- 6) ☐ Claim(s) 1-6, 8-10, 13-23, 25-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Response to Amendment

1. The indicated allowability of claims 6, 10, 16-17, 25-26 is withdrawn in view of the newly discovered reference to Sakuyama (U.S. Patent No. 5,729,373). Rejections based on the newly cited reference follow.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 19 recites the limitation "said state". There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

5. Claims 1-2, 8-10, and 19 are rejected under 35 U.S.C. 102(a) as being anticipated by Sakuyama (U.S. Patent No. 5,729,373).

Referring to claims 1, 2, 8, 10, and 19, Sakuyama teaches a reproducing circuit of the present invention includes an optoelectric converter for receiving an optical signal in which a predetermined monitor signal is superimposed. The optoelectric converter outputs an electric signal having an amplitude in correspondence to an intensity of the received optical signal. A filter extracts a signal component of the monitor signal from the electric signal provided from the

Art Unit: 2676

optoelectric convertor. The variation of amplitude of the electric signal output from the optoelectric convertor is smoothed by a smoothing circuit. The signal extracted by the filter is converted into a binary signal by a binary signal producing circuit using the magnitude of amplitude of the smoothed signal as a threshold value (col. 1, lines 64-67, and col. 2, lines 1-15).

FIGS. 5A to 5D show an example of signal waveforms in various portions of the reproducing circuit shown in FIG. 3. In the output waveform of the preamplifier 107 shown FIG. 5A, the monitor signal component 22 is superimposed on the main signal component. When the value of the monitor signal is "0", only the main signal component is remained, whereas, when the value as the monitor signal is "1", the main signal is modulated by a carrier signal 22 having a predetermined frequency. When the signal having such a waveform is input to the band pass filter 108, the main signal component having high frequency is removed. Therefore, when the value of monitor signal is "0", the signal waveform 23, shown in FIG. 5B has a constant voltage, whereas, when the value of monitor signal is "1", the signal waveform 24, in which the carrier signal is superimposed on the constant voltage, is obtained (col. 3, lines 56-67, and col. 4, lines 1-4). Thus, the logical value of the static signal does not change.

In regard to claim 9, as cited above, Sakuyama teaches the variation of the threshold voltage is dependent on the intensity of the input signal. Therefore, when the input signal is large enough, the deviation of 5 volts can be produced.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are

Art Unit: 2676

such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 3-5, 13-15, 18, 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakuyama (U.S. Patent No. 5,729,373) in view of admitted prior art.

Referring to claims 3-5, 13-15, 18, 20-22, as applied to claims 1, 10, and 19, Sakuyama teaches all the limitations of claims 3-5, 13-15, 18, 20-22, except that the system is for use in a commercial airline display unit.

However, Applicant's specification admits the ARINC 722 connectors couple to in-flight system display units as prior art, which can be used to interface with LCD display, the ARINC 722 connector comprises an "on indicator" signal, which is a 28-Volt DC level on pin 8 (pages 2-4), including a tapping unit (Fig. 2).

Therefore, it would have been obvious to one skilled in the art to utilize the connectors as admitted in prior art in combination with the method as taught by Sakuyama in order to promote commonality and reduce cost (page 2).

8. Claims 6, 16-17, 23, 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over admitted prior art in view of Sakuyama (U.S. Patent No. 5,729,373).

Referring to claims 6, 16-17, 23, 25-26, Applicant's specification admits the ARINC 722 connectors couple to in-flight system display units as prior art, which can be used to interface with LCD display, the ARINC 722 connector comprises an "on indicator" signal, which is a 28-Volt DC level on pin 8 (pages 2-4), including a tapping unit (Fig. 2).

Thus, admitted prior art teaches all the limitations of claims 6, 16-17, 23, 25-26, except that the electronic system providing data to be superimposed on a static signal.

Art Unit: 2676

However, as cited above, Sakuyama teaches a method of superimposing data on a constant voltage (static signal), and producing deviation of the constant voltage depending the intensity of the input signal data. Sakuyama further teaches a threshold voltage 116 (Fig. 3) of a predetermined voltage is input to the discriminator 115 (a comparator) and is compared with the output of the envelope detector 111 (col. 2, lines 65-67).

Therefore, it would have been obvious to one skilled in the art to utilize the ARINC 722 connectors of admitted prior art in combination with the method as taught by Sakuyama in order to retrieve input signal without being interfered by noise (col. 1, lines 52-55).

Allowable Subject Matter

9. Claims 7, 11-12, and 24 are allowed.

Reasons for Allowance

10. The following is a statement of reasons for the indication of allowable subject matter:

The prior art taken singly or in combination does not teach or suggest, a method for superimposing data on a static signal, among other things, comprises a shift register for receiving discrete data values (claims 7 and 11), and an optocoupler (claim 24).

The closest prior art Sakuyama (U.S. Patent No. 5,729,373) does not teach a shift register or an optocoupler.

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hau H. Nguyen whose telephone number is: 703-305-4104. The examiner can normally be reached on MON-FRI from 8:30-5:30.

Art Unit: 2676

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Bella can be reached on 703-308-6829.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D. C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered response should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

H. Nguyen

12/01/2003



MATTHEW C. BELLA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600